

ITEM 203.29 06 - REMOVING AND PLUGGING EXISTING GROUND MONITORING WELL

DESCRIPTION:

Under this item the Contractor shall remove a portion of the existing monitoring well, and fill the remaining well casing, in accordance with the provisions of this specification, the details included in the contract plans, the directions of the Engineer, and the requirements of the U.S. EPA Region II and New York State Department of Environmental Conservation Project Managers. This work is to comply with procedures outlined in the NYSDEC Division of Environmental Remediation document "Groundwater Monitoring Well Decommission Procedures" dated October 1996.

The NYSDEC Project Manager for this contract will be Mr. Sal Prioiri of the NYSDEC Western Remedial Office, who may be reached at (518) 402-9662. The U.S. EPA project Manager for this contract will be Ms. Isabelle Rodriguez at the U.S. EPA Region II Office who may be reached at (212) 637-4248.

Three (3) existing groundwater monitoring wells shown on construction drawings shall be removed and plugged in accordance with this specification. Details on the three (3) existing groundwater monitoring wells are as follows:

<u>Monitoring Well</u>	<u>Diameter</u>	<u>Construction</u>	<u>Depth Below Grade</u>
MW-104S	10.2 cm (4")	PVC	5.5 meters (18 feet)
MW-104D	10.2 cm (4")	PVC	10.4 meters (34 feet)
MW-X	5.1 cm (2")	PVC (assumed)	estimated 6.1 meters (20 feet)

MATERIALS:

All materials used shall be as outlined under the Construction Details section of this specification. Any material substitutions shall be approved in advance by the NYSDEC Project Manager and the Engineer.

CONSTRUCTION DETAILS:

The Contractor shall inform the Engineer, the U.S. EPA Project Manager and the NYSDEC Project Manager a minimum of five (5) days in advance of removing and plugging of the groundwater monitoring wells.

Any changes to the procedures described below shall be approved in advance by the Engineer and the NYSDEC Project Manager.

The Contractor shall take precautions to prevent any materials, other than those specified, from entering the well casing. Once the existing well cap is removed, and the casing trimmed so that the

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well cannot be resealed, plugging must be completed prior to the end of that work day to ensure that no contaminants enter the well.

Wells to be removed and plugged shall be altered during the construction phase that includes reconstruction of the surrounding or adjacent pavement, shoulder, or embankment.

Portions of the existing well to be removed shall include the protective steel stand pipe and associated concrete, the water proof cap, and the portion of the well casing that extends for 1.0 meter below the finished grade elevation in that location. All protective posts surrounding the monitoring wells are also to be completely removed and backfilled.

Immediately upon removal of the above portions of the well the remaining well casing shall be filled as follows: The portion of the well occupied by the screen shall be filled with clean coarse sand. The NYSDEC Project Manager shall be consulted regarding the height of the existing screen. In no case shall the sand filling extend above the top of the screen.

The interior of the riser pipe, and any existing annular space outside of the casing, shall be filled with a portland cement/bentonite grout. The grout, which is to be prepared on-site, shall consist of the following standard mixture:

- One 42.6 kg (94 pound) bag type I Portland cement
- 1.8 kg (3.9 pounds) powdered bentonite
- 29.5 liters (7.8 gallons) potable water

For this grout, approximately 5.4 kg (12 pounds) of type I Portland cement and 0.23 kg (0.5 pound) of powdered bentonite is to be mixed per 3.8 liters (1.0 gallon) of water. Sufficient grout is to be prepared on-site to completely backfill the abandoned well and to fill the surface excavation

The grout shall be placed under pressure through a tremie pipe to the bottom of the well in order to prevent gaps or voids from developing and to prevent dilution of the grout mixture. The placing of the grout shall be continuous until grout appears at the top of the casing, at which time the grout pipe may be withdrawn.

After the grout has consolidated, as confirmed by visual inspection, the top of the casing shall be closed and sealed. The disturbed soils at the top of the well and the 1.0 meter deep excavation for the removed section of the well shall be filled with cement concrete.

DISPOSAL REQUIREMENTS:

Wastes to be generated as part of this item will consist of broken concrete, the steel protective

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locking casing, and broken sections of PVC pipe. This material can be treated as uncontaminated. The debris is to be disposed of as appropriate for construction and demolition debris.

METHOD OF MEASUREMENT:

This work will be measured by the number of monitoring wells that are plugged in accordance with the plans, specifications, orders of the Engineer, and requirements of the NYSDEC Project Manager.

BASIS OF PAYMENT:

The unit price bid for this item shall include the cost of all labor, equipment, and materials necessary to complete the work.